CLAIMS

1. A colour electroluminescent, EL, display device comprising an array of pixels (11); wherein:

each pixel (11) comprises sub-pixels (1) of two or more main colours;

for at least one of the main colours, the pixels (11) comprise first sub-pixels (R_L, G_L, B_L) of the main colour comprising a first EL material and second sub-pixels (R_C, G_C, B_C) of the main colour comprising a second EL material;

the first EL material is of a higher lifetime than the second EL material; and

the second EL material has a better colour point and/or better colour rendition properties than the first EL material.

2. A display device according to claim 1, wherein each pixel (11) comprises a said first sub-pixel (R_L, G_L, B_L) of the main colour comprising a first EL material and a said second sub-pixel (R_C, G_C, B_C) of the main colour comprising a second EL material.

3. A display device according to claim 2, further comprising circuitry (12) arranged to drive the display device such that when a colour or colour hue to be displayed by the pixel can be provided with a sufficient colour contribution of the main colour of the first and second sub-pixels by driving the first sub-pixel (R_L, G_L, B_L) without driving the second sub-pixel (R_C, G_C, B_C), then the first sub-pixel (R_L, G_L, B_L) is driven but not the second sub-pixel (R_C, G_C, B_C); and further arranged such that when the colour or colour hue to be displayed cannot be provided with a sufficient colour contribution of the main colour of the first and second sub-pixels by driving the first sub-pixel (R_L, G_L, B_L) without driving the second sub-pixel (R_C, G_C, B_C), then the second sub-pixel (R_C, G_C, B_C) is driven.

4. A display device according to claim 3, wherein the driving circuitry (12) is arranged such that, when the colour or colour hue to be

displayed cannot be provided with a sufficient colour contribution of the main colour of the first and second sub-pixels by driving the first sub-pixel (R_L, G_L, B_L) without driving the second sub-pixel (R_C, G_C, B_C), then the second sub-pixel (R_C, G_C, B_C) is driven in addition to driving the first sub-pixel (R_L, G_L, B_L).

5. A display device according to claim 3, wherein the driving circuitry (12) is arranged such that, when the colour or colour hue to be displayed cannot be provided with a sufficient colour contribution of the main colour of the first and second sub-pixels by driving the first sub-pixel (R_L, G_L, B_L) without driving the second sub-pixel (R_C, G_C, B_C), then the second sub-pixel (R_C, G_C, B_C) is driven instead of driving the first sub-pixel (R_L, G_L, B_L).

6. A display device according to any of claims 1 to 5, wherein, for each of the main colours, the pixels comprise first sub-pixels (R_L, G_L, B_L) of the main colour comprising a first EL material and second sub-pixels (R_C, G_C, B_C) of the main colour comprising a second EL material;

the first EL material is of a higher lifetime than the second EL material; and

the second EL material has a better colour point and/or better colour rendition properties than the first EL material.

7. A display device according to any of claims 1 to 5, wherein, for only the main colour blue, the pixels comprise first blue sub-pixels (B_L) comprising a first EL material and second blue sub-pixels (B_C) comprising a second EL material;

the first EL material is of a higher lifetime than the second EL material; and

the second EL material has a better colour point and/or better colour rendition properties than the first EL material.

8. A display device according to claim 7 when dependent from claim 1, wherein some of the pixels comprise a said first blue sub-pixel (B_L)

and not a said second blue sub-pixel (B_C); and the remaining pixels comprise a said second blue sub-pixel (B_C) and not a said first blue sub-pixel (B_L).

9. A display device according to any of claims 1 to 8, wherein the main colours are red, green and blue.

10. A method of driving a colour electroluminescent, EL, display device, comprising:

determining whether a sufficient colour contribution to a colour hue to be displayed can be provided by a first sub-pixel (R_L, G_L, B_L) of a pair of colour sub-pixels of a given colour, wherein the first sub-pixel (R_L, G_L, B_L) of the pair comprises a first EL material and the second sub-pixel (R_C, G_C, B_C) of the pair comprises a second EL material, the first EL material being of a higher lifetime than the second EL material, and the second EL material having better colour points and/or better colour rendition properties than the first EL material;

if a sufficient colour contribution can be provided, driving the first sub-pixel (R_L, G_L, B_L) but not the second sub-pixel (R_C, G_C, B_C); and

if a sufficient colour contribution cannot be provided, driving the second sub-pixel (R_C, G_C, B_C).

11. A method according to claim 10, wherein, if a sufficient colour cannot be provided, the step of driving the second sub-pixel (R_C, G_C, B_C) is performed in addition to driving the first sub-pixel (R_L, G_L, B_L) such that both the first and second sub-pixel make a colour contribution to the colour hue to be displayed.

12. A method according to claim 10, wherein, if a sufficient colour cannot be provided, the step of driving the second sub-pixel (R_C, G_C, B_C) is performed instead of driving the first sub-pixel (R_L, G_L, B_L) such that the second sub-pixel (R_C, G_C, B_C) makes a colour contribution to the colour hue to be displayed but the first sub-pixel (R_L, G_L, B_L) does not make a contribution to the colour hue to be displayed.